124. Proposed by JOHN M. COLAW, A. M., Monterey, Va.

Show that the cardioides $r=a(1+\cos\theta)$....(1), and $r=b(1-\cos\theta)$....(2), intersect at right angles.

125. Proposed by F. P. MATZ, M. Sc., Ph. D., Professor of Mathematics and Astronomy in Irving College, Mechanicsburg, Pa.

Show that the *complete primitive* of the Differential Equation

$$\left[\tan^{-1}(x)-\frac{x}{1+x^2}\right]\frac{d^2y}{dx^2}=2\left(\frac{x}{(1+x^2)^2}\right)\left[x\frac{dy}{dx}-y\right],$$

is $y=C\tan^{-1}(x)+cx$.

*** Solutions of these problems should be sent to J. M. Colaw not later than April 10.

EDITORIALS.

Dr. C. N. Little, professor of Mathematics in Leland Stanford University, has resigned his position.

Mr. S. W. Reaves, graduate scholar in Cornell University, has been appointed instructor in Mathematics at Orchard Lake Military Academy.

Professor Charles Hermite, the venerable dean of French mathematicians, died after a brief illness at his home in Paris, on January 14, 1901, and in his death the mathematical world sustains a great loss. He was born at Dieuze, December 25, 1822. In 1858, 1865, 1866, his transcendental solution of the quintic equation involving elliptic integrals was published in the *Comptes Rendus*. The theory of Differential Equations, the reduction of Abelian to Elliptic Functions, the Theory of Functions, and many other mathematical subjects, have received substantial additions at the hands of this great savant.

BOOKS AND PERIODICALS.

The Teaching of Mathematics in the Higher Schools of Prussia. By J. W. A. Young, Ph. D., Assistant Professor of the Pedagogy of Mathematics in the University of Chicago. 8vo. Cloth, 141 pages. Price, 80 cents. New York: Longmans, Green & Co.

The account of the Prussian High School System with detailed and specific description of the work in mathematics as set forth in this little volume is most timely—coming as it does at the close of the 19th century, the last part of the last twenty-five years of which has witnessed great changes and improved methods in mathematical teaching in America. There is still room for great improvement along the line and just at present great pressure is being brought to bear on mathematical teaching in colleges by the great universities, the colleges in turn are demanding a better quality of work in mathematics of the high school, and it is hoped that the result will be general improvement all along the line of mathematical teaching.

Dr. Young has gathered much of the material for the account respecting the Prussian Higher School System by personal observation, and in this account are to be found much that is of highest value to American teachers. All teachers in America who have been the subjects of political intrigue and personal whims rejoice to know that the German teacher works with a sense of security in his position without regard to political occurrences, or the whims of the powerful and influential, security in a modest compe-

tency while at work, security in his profession as a life work. This enables the German teacher to utilize all his energies in the improvement of his mind, and thus none are lost in the way of political scheming so common and so debasing in this country.

The American Journal of Mathematics. Edited by Frank Morley with the coöperation of Simon Newcomb, S. Cohen, Charlotte A. Scott and other mathematicians. Vol. XXIII, No. 1.

This number contains the following papers:

Die Typen der linearen Complexe rationaler Curven im *Rr.*, Von S. Kantor; Transformations of Systems of Linear Differential Equations, by E. J. Wilczynski; Distribution of the Ternary Linear Homogenious Substitutions in Galios Field into Complete Sets of Conjugate Substitutions, by L. E. Dickson; Distribution of the Quarternary Linear Homogenious Substitution in a Galois Field into Complete Sets of Conjugate Substitutions, by T. M. Putnam; On the Determination and Solution of the Metacyclic Quintic Equations with Rational Coefficients, by J. G. Glashan; Construction of the Geometry of Euclidean n-Dimensional Space by the Theory of Continuous Groups, by E. O. Lovett; A Table of Class Numbers for Cubic Number Fields, by L. W. Reid; On Certain Properties of the Plane Cubic Curve in Relation to the Circular Points at Infinity, by R. A. Roberts.

The Annals of Mathematics. Published in October, January, April, and July, under the auspices of Harvard University. Price, $2.00 per year in advance.

Among the articles in the January number for 1901 are the following: An Application of Elliptic Functions to Peaucellier's Link-Work, by Dr. Arnold Emch; Note on the Geometrical Treatment of Conics, by Professor Charlotte A. Scott; On a Special Class of Abelian Groups, by Dr. G. A. Miller; The Theory of Linear Dependence, by Maxime Bocher.

Divergent and Conditionally Convergent Series Whose Product is Absolutely Convergent. By Dr. Florian Cajori.

This is a reprint of a very interesting article which appeared in the Transactions of the American Mathematical Society.

Errata.

Pages 2—7, all square brackets should be parenthesis.

Pages 3—4, for H read K [kappa].

Page 4, first line, $(x-r)\lambda-1$ should read $((x-r)\lambda-1)$.

Page 5, in formula (14), $\binom{K+1}{\nu^1}$ should read $\binom{\nu^1}{K+1}$.

Page 7, line 6 from below $\begin{bmatrix}\nu^2\\ r\end{bmatrix}$ should be $\binom{\nu}{r}$.

Page 21, see the restatement of Problem 129, Algebra, in this number.

Page 22, see the restatement of Prize Problem, 123, Calculus, on page 54, of this number.

Page 24, line 5, for π read e.

Page 235, Vol. VII, Problem 103, Mechanics, should be numbered 109. Renumber accordingly, all the problems in Mechanics, proposed since then.

Problems 146 and 147, Geometry, in this issue, are proposed for the May number, Vol. VII.